

GNE.3230R1C34



PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant	:	Goddard et al. (as amended)
Appl. No.	:	10/063,549
Filed	:	May 2, 2002
For	:	POLYPEPTIDES ENCODED BY A NUCLEIC ACID OVEREXPRESSED IN ESOPHAGEAL AND KIDNEY TUMOR (as amended)
Examiner	:	Patricia Ann Duffy
Group Art Unit	:	1645

**DECLARATION UNDER 37 CFR §1.131**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

We declare and state as follows:

1. We are the inventors of the invention claimed in the above-captioned patent application.
2. During the time period in which we participated in the events and activities described herein, we were employed by Genentech, Inc., the assignee of the above-captioned application.
3. All of the events and activities described herein were performed by us personally, or by others at our direction as part of our duties as employees of Genentech, Inc.
4. The subject matter and utility of the claimed invention in the above-captioned patent application was conceived prior to June 11, 1998 and diligently reduced to practice thereafter in the U.S. as described below.
5. Prior to June 11, 1998, I and/or my co-inventors conceived of the invention claimed in the above-captioned patent application. Prior to June 11, 1998, the idea of investigating several newly discovered DNA sequences for their relevance, including developing primers and cloning the DNA sequences of interest from normal and tumor tissues, was conceived. The sequences of SEQ ID NOS: 45 and 46 were first disclosed in U.S. Provisional Application 60/088863, filed June 11, 1998, as SEQ ID NOS: 1 and 3, in Figures 1A-B and 2. Antibodies to said polypeptides sequence were also contemplated as disclosed in the provisional application. In addition, various utilities for the disclosed nucleic acids, polypeptides, and antibodies, including use as diagnostic

Appl. No. : 10/063,549  
Filed : May 2, 2002

agents, were also conceived prior to June 11, 1998, and included in the provisional application. Thus, conception of the invention claimed in the above-captioned patent application occurred prior to June 11, 1998.

6. After these initial experiments, we continued to produce primers, clone and sequence other DNA sequences. We then began to identify the expression levels of the cloned sequences, and created constructs for expression of the encoded proteins. PCR primers for use in the detection of DNA58850 expression were designed on March 6, 2000 (see Exhibit A).

7. Thereafter, the primers were used to test for expression of DNA58850 in various normal and tumor tissues. Exhibit B shows an experiment conducted in March 2000 testing for expression of DNA58850 in various normal tissues. Exhibit C shows an experiment performed on June 13, 2000, in which the primers were used to determine the expression level of DNA58850 in various tumor samples and their normal tissue counterparts. These gel data demonstrate that DNA58850 is more highly expressed in esophageal and kidney tumor than in normal esophageal and kidney tissue, respectively. These exhibits show diligence in reducing to practice following conception of the invention. Thus, we conceived of the present invention prior to June 11, 1998 and were diligent in reducing the invention to practice by at least June 13, 2000.

8. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information or belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful statements may jeopardize the validity of the application or any patent issued thereon.

By:  Date: 5/16/05  
Audrey Goddard

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Paul J. Godowski

By: \_\_\_\_\_ Date: \_\_\_\_\_  
J. Christopher Grimaldi

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Austin L. Gurney

By: \_\_\_\_\_ Date: \_\_\_\_\_  
William I. Wood

1764824  
061205

Appl. No. : 10/063,549  
Filed : May 2, 2002

agents, were also conceived prior to June 11, 1998, and included in the provisional application. Thus, conception of the invention claimed in the above-captioned patent application occurred prior to June 11, 1998.

6. After these initial experiments, we continued to produce primers, clone and sequence other DNA sequences. We then began to identify the expression levels of the cloned sequences, and created constructs for expression of the encoded proteins. PCR primers for use in the detection of DNA58850 expression were designed on March 6, 2000 (see Exhibit A).

7. Thereafter, the primers were used to test for expression of DNA58850 in various normal and tumor tissues. Exhibit B shows an experiment conducted in March 2000 testing for expression of DNA58850 in various normal tissues. Exhibit C shows an experiment performed on June 13, 2000, in which the primers were used to determine the expression level of DNA58850 in various tumor samples and their normal tissue counterparts. These gel data demonstrate that DNA58850 is more highly expressed in esophageal and kidney tumor than in normal esophageal and kidney tissue, respectively. These exhibits show diligence in reducing to practice following conception of the invention. Thus, we conceived of the present invention prior to June 11, 1998 and were diligent in reducing the invention to practice by at least June 13, 2000.

8. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information or belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful statements may jeopardize the validity of the application or any patent issued thereon.

By: \_\_\_\_\_ Date: \_\_\_\_\_

Audrey Goddard

By: \_\_\_\_\_ Date: 6/17/05

Paul J. Godowski

By: \_\_\_\_\_ Date: \_\_\_\_\_

J. Christopher Grimaldi

By: \_\_\_\_\_ Date: \_\_\_\_\_

Austin L. Gurney

By: \_\_\_\_\_ Date: \_\_\_\_\_

William I. Wood

1764824  
061205

Appl. No. : 10/063,549  
Filed : May 2, 2002

agents, were also conceived prior to June 11, 1998, and included in the provisional application. Thus, conception of the invention claimed in the above-captioned patent application occurred prior to June 11, 1998.

6. After these initial experiments, we continued to produce primers, clone and sequence other DNA sequences. We then began to identify the expression levels of the cloned sequences, and created constructs for expression of the encoded proteins. PCR primers for use in the detection of DNA58850 expression were designed on March 6, 2000 (see Exhibit A).

7. Thereafter, the primers were used to test for expression of DNA58850 in various normal and tumor tissues. Exhibit B shows an experiment conducted in March 2000 testing for expression of DNA58850 in various normal tissues. Exhibit C shows an experiment performed on June 13, 2000, in which the primers were used to determine the expression level of DNA58850 in various tumor samples and their normal tissue counterparts. These gel data demonstrate that DNA58850 is more highly expressed in esophageal and kidney tumor than in normal esophageal and kidney tissue, respectively. These exhibits show diligence in reducing to practice following conception of the invention. Thus, we conceived of the present invention prior to June 11, 1998 and were diligent in reducing the invention to practice by at least June 13, 2000.

8. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information or belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful statements may jeopardize the validity of the application or any patent issued thereon.

By: \_\_\_\_\_  
Audrey Goddard

Date: \_\_\_\_\_

By: \_\_\_\_\_  
Paul J. Godowski

Date: \_\_\_\_\_

By: \_\_\_\_\_  
J. Christopher Grimaldi

Date: 6/14/2005

By: \_\_\_\_\_  
Austin L. Gurney

Date: \_\_\_\_\_

By: \_\_\_\_\_  
William I. Wood

Date: \_\_\_\_\_

1764824  
061205

Appl. No. : 10/063,549  
Filed : May 2, 2002

agents, were also conceived prior to June 11, 1998, and included in the provisional application. Thus, conception of the invention claimed in the above-captioned patent application occurred prior to June 11, 1998.

6. After these initial experiments, we continued to produce primers, clone and sequence other DNA sequences. We then began to identify the expression levels of the cloned sequences, and created constructs for expression of the encoded proteins. PCR primers for use in the detection of DNA58850 expression were designed on March 6, 2000 (see Exhibit A).

7. Thereafter, the primers were used to test for expression of DNA58850 in various normal and tumor tissues. Exhibit B shows an experiment conducted in March 2000 testing for expression of DNA58850 in various normal tissues. Exhibit C shows an experiment performed on June 13, 2000, in which the primers were used to determine the expression level of DNA58850 in various tumor samples and their normal tissue counterparts. These gel data demonstrate that DNA58850 is more highly expressed in esophageal and kidney tumor than in normal esophageal and kidney tissue, respectively. These exhibits show diligence in reducing to practice following conception of the invention. Thus, we conceived of the present invention prior to June 11, 1998 and were diligent in reducing the invention to practice by at least June 13, 2000.

8. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information or belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful statements may jeopardize the validity of the application or any patent issued thereon.

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Audrey Goddard

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Paul J. Godowski

By: \_\_\_\_\_ Date: \_\_\_\_\_  
J. Christopher Grimaldi

By: \_\_\_\_\_ Date: 6/17/00  
Austin E. Gurney

By: \_\_\_\_\_ Date: \_\_\_\_\_  
William I. Wood

1764824  
061205

Appl. No. : 10/063,549  
Filed : May 2, 2002

agents, were also conceived prior to June 11, 1998, and included in the provisional application. Thus, conception of the invention claimed in the above-captioned patent application occurred prior to June 11, 1998.

6. After these initial experiments, we continued to produce primers, clone and sequence other DNA sequences. We then began to identify the expression levels of the cloned sequences, and created constructs for expression of the encoded proteins. PCR primers for use in the detection of DNA58850 expression were designed on March 6, 2000 (see Exhibit A).

7. Thereafter, the primers were used to test for expression of DNA58850 in various normal and tumor tissues. Exhibit B shows an experiment conducted in March 2000 testing for expression of DNA58850 in various normal tissues. Exhibit C shows an experiment performed on June 13, 2000, in which the primers were used to determine the expression level of DNA58850 in various tumor samples and their normal tissue counterparts. These gel data demonstrate that DNA58850 is more highly expressed in esophageal and kidney tumor than in normal esophageal and kidney tissue, respectively. These exhibits show diligence in reducing to practice following conception of the invention. Thus, we conceived of the present invention prior to June 11, 1998 and were diligent in reducing the invention to practice by at least June 13, 2000.

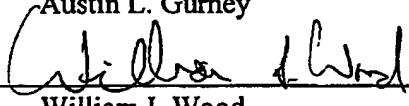
8. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information or belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful statements may jeopardize the validity of the application or any patent issued thereon.

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Audrey Goddard

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Paul J. Godowski

By: \_\_\_\_\_ Date: \_\_\_\_\_  
J. Christopher Grimaldi

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Austin L. Gurney

By:  \_\_\_\_\_ Date: 6/7/05  
William I. Wood

1764824  
061205

[REDACTED]

User:grim

oli.out3\_6\_2000

Tue Aug 10 16:46:53 PDT 2004

xe12380 / XE12380

[REDACTED]

xe12380 User:grim Job: oli.out3\_6\_2000 Date: Tue Aug 10 16:46:53 PDT 2004

xe12380 User:grim Job: oli.out3\_6\_2000 Date: Tue Aug 10 16:46:53 PDT 2004

xe12380 User:grim Job: oli.out3\_6\_2000 Date: Tue Aug 10 16:46:53 PDT 2004

xe12380 User:grim Job: oli.out3\_6\_2000 Date: Tue Aug 10 16:46:53 PDT 2004

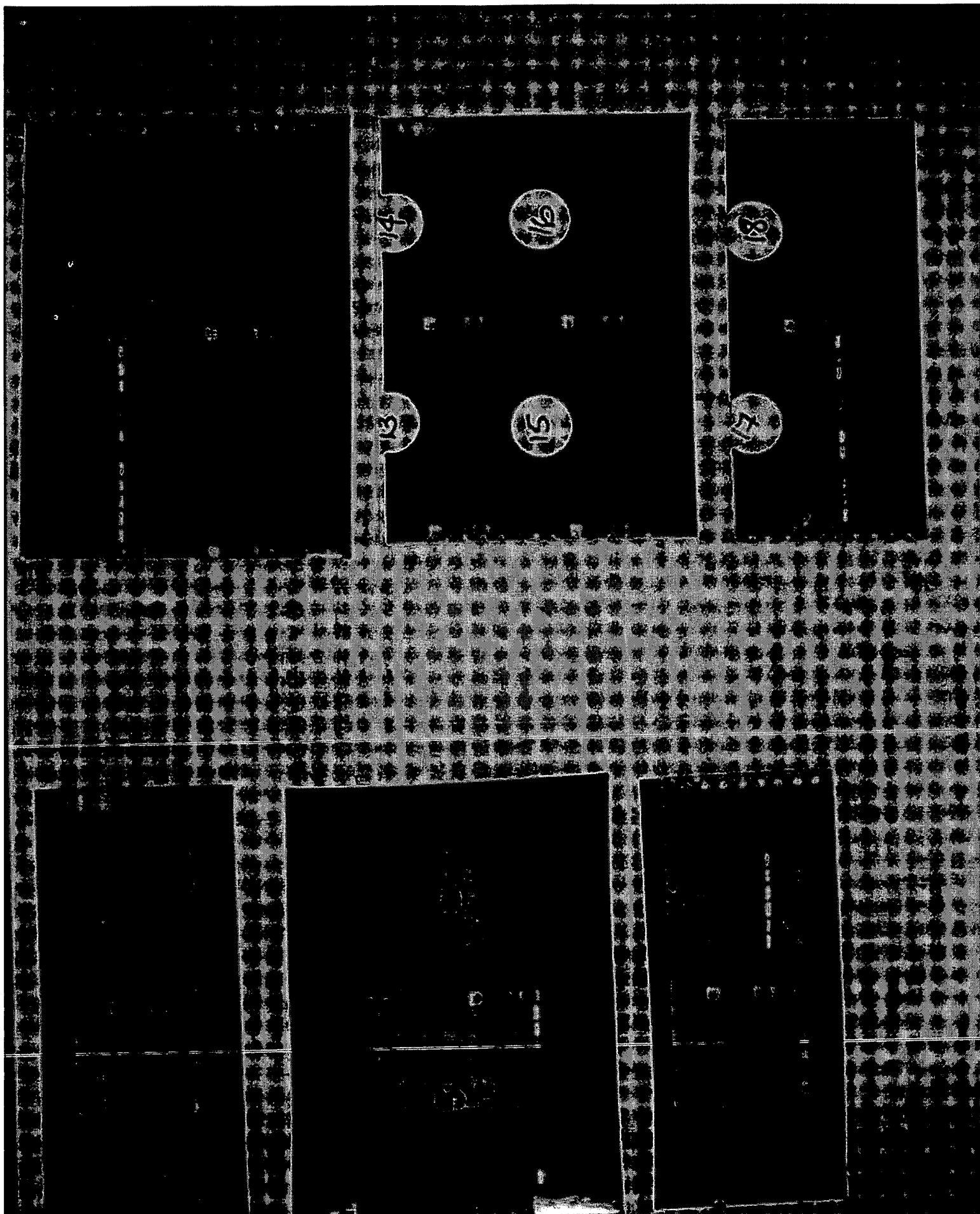
<16422.f10 OLI28176>AGTTGCAACTATGCTGGCAACTGGAGG  
 <16422.r10 OLI28177>CCCAGATGTTTCTTACTGGCTCCTCACTAATC  
 <16435.f10 OLI28178>GAGGCAACTAAAAAGGCTTCAAACGTTTTG  
 <16435.r10 OLI28179>CAAAATCAATAACGTCATCAGCTTCCTAACCATG  
 <23334.f10 OLI28180>CGTTGGTTGAAGGACCTAAATACCTGGC  
 <23334.r10 OLI28181>CTTCTATCATCACCCAGCTGCATGACC  
 <26843.f10 OLI28182>GCAAGTTCATGCTCTGAGTCCTGAAGAG  
 <26843.r10 OLI28183>GGTGCAGTGTCTAGAGGGTTAATCCATG  
 <26844.f10 OLI28184>CCAATTCTGAACATTCCCATCGTGC  
 <26844.r10 OLI28185>GTGCTGGGATTACAGGCGGTGAGC  
 <26844.f10>CCAATTCTGAACATTCCCATCGTGC  
 <26844.r10>GTGCTGGGATTACAGGCGGTGAGC  
 <30862.f10 OLI28186>CACCTGAAGGTGATGCTCCTGGAAG  
 <30862.r10 OLI28187>GCGGTTCCATCGCAGATGACC  
 <40621.f10 OLI28188>CTGGCTGCCCATCATGACCTCC  
 <40621.r10 OLI28189>CTCCTGCCTCAGCCTCCCGAGTAG  
 <44161.f10 OLI28190>GAAGGACATGCGCGTGACAGAC  
 <44161.r10 OLI28191>GAGCTGGTGCTTTCCGCTGCC  
 <44694.f10 OLI28192>CCACAGCTGATACGGCATCCTGC  
 <44694.r10 OLI28193>CCAGAGTCTGCATGAGCACC AATG  
 <48320.f10 OLI28194>CCTCACTAGCACCTGGAATGATGCTTTG  
 <48320.r10 OLI28195>CACTCATAAGTTGCACATATGCTCCAAGGTC  
 <48334.f10 OLI28196>CAAGGAGGCAAAATTTTGACAGGGAAGG  
 <48334.r10 OLI28197>CTACACACAGAATAAGGTTGGGGAATTAAGCTG  
 <48606.f10 OLI28198>CAGCATGCCAGGCCTCACG  
 <48606.r10 OLI28199>CTTTCTCAGGCCTCCTGGCCAATAG  
 <49141.f10 OLI28200>CCACGTATCTCATGTGCCGAATGTG  
 <49141.r10 OLI28201>GTGCAGCCTCACACTGCCTTCTCC  
 <49647.f10 OLI28202>GGCAGTGAACACATCTGATTTCCACAG  
 <49647.r10 OLI28203>CCCTCAAAAGCCAGTTACATTACATGTTACAG  
 <49819.f10 OLI28204>GGTTGCCATTCCATAGGTTTGGAGAGC  
 <49819.r10 OLI28205>GCATTACCTACCTGTCTAACCCCTCACATG  
 <49820.f10 OLI28206>GAGAAGCTGACTGAGGAAGGCTCTCCC  
 <49820.r10 OLI28207>CTACTGGAAGCAGGCACAGTGTCACTAGC  
 <53913.f10 OLI28208>GCTTCCGTCCCTGAATCCCTTCC  
 <53913.r10 OLI28209>GTGTGAAACTGCTTGGTGGCTGTTCC  
 <53978.f10 OLI28210>GTGATGAATGGTCACACACCGATGCAC  
 <53978.r10 OLI28211>GAATCCTGGGGGATCAAATCATATGAATG  
 <53996.f10 OLI28212>CCAGATGGCACGCACTGCCATG  
 <53996.r10 OLI28213>CCAGAACAGCAGTGAGGCAGATTGATG  
 <56050.f10 OLI28214>GAAGGCTTCCTGCAGGAGCAGTCTG  
 <56050.r10 OLI28215>CAGGCCAGGTGAGAGAGTACAAGTCTTGC  
 <56110.f10 OLI28216>GTAGCCGGCTTGGCTTTTGTAAATTGG  
 <56110.r10 OLI28217>GGATGGCTGAGTTTCGCACATTGTG  
 <56410.f10 OLI28218>CCTGAAGCTAGTCCAGCTAGTACACCACAAATC  
 <56410.r10 OLI28219>CAATCCTCCTGACTGTCTTCCCTAAGTGC  
 <56436.f10 OLI28220>GAAATGGATTAGCCAACCAGGGCAAC  
 <56436.r10 OLI28221>GGAGCAGGAACCAACTCAATGCACAG  
 <56855.f10 OLI28222>GCAACTTACAGCTGCACCGACAGTTG  
 <56855.r10 OLI28223>GAGAGCACTGGAATGATTTAGGGGTGG  
 <56859.f10 OLI28224>GGCTGTCTTAGTACTTCGCCTGACAGTTGTC  
 <56859.r10 OLI28225>CCATCAACTATGTGATCCCAAAGCGC  
 <56860.f10 OLI28226>CTTCATGTGGCAGCAAGTTTTGAGC  
 <56860.r10 OLI28227>GAGACGCATGGGTGTAGCCTCAGG  
 <56865.f10 OLI28228>CTAACCAACTGGAAAAATGGATGAAACTCAATG  
 <56865.r10 OLI28229>GTCTGTCTGGGAAGCTGACTGCCAGAC  
 <56868.f10 OLI28230>GGATTCCGAGAATCATTGTCTATGTACATGC  
 <56868.r10 OLI28231>GTTCCCTCCTCATTCTTAATGAGTGCTTG  
 <56869.f10 OLI28232>CAACTTCGCCCTGGAGCAGCTCTTC  
 <56869.r10 OLI28233>CTCCAGCACCTCAACATGATGTAGCC



<56870.f10 OLI28234>GAACTCGGAAGAGATGCTGTGGAATCC  
 <56870.r10 OLI28235>CCTGTCCCAGTAATGCCAACTTGGAG  
 <57699.f10 OLI28236>CCTACGGTGAGAAGCTTACCATAAGCTTGG  
 <57699.r10 OLI28237>CATGGCATGGCTACCGCTTCCTTAG  
 <57704.f10 OLI28238>GCCCCAATGCCAAGTACGTAATGAAG  
 <57704.r10 OLI28239>CAGTGTAAAGCCAGCACACTGACCTCC  
 <57710.f10 OLI28240>CAGCCTCCAAGCCATCATCACCAG  
 <57710.r10 OLI28241>GTCCTGAGCGACTGCCACCATG  
 <57711.f10 OLI28242>GCATCGAAGCCCGTGAAATCCAG  
 <57711.r10 OLI28243>GTCAGGCACTGTGGTGAAAGGGAACG  
 <57827.f10 OLI28244>GCCATCAATGGACATGATCTTCGATATGG  
 <57827.r10 OLI28245>CCATGTTGTGGTTGGAGTCCAGGG  
 <57844.f10 OLI28246>CCGTGGAATGGAGTTGATCCCAACC  
 <57844.r10 OLI28247>GCCTATCTAAGGTCCCTTGCTGCAAGG  
 <58723.f10 OLI28248>GATAAAACATGCAGCCACAGGCTCTCC  
 <58723.r10 OLI28249>GGACCAGACTGTACTGTGGCCATGTACAC  
 <58737.f10 OLI28250>GCACACATTAAGAACCTGTTACAGCTCATTGTTG  
 <58737.r10 OLI28251>GAAGGCTATCAGCACCTGCAACCAGC  
 <58743.f10 OLI28252>CACATGCGTCACATGGGCATTTT  
 <58743.r10 OLI28253>GTTTCGCACCATTTCTCCTGCCTCAG  
 <58846.f10 OLI28254>CCCAGCAGTGGGACAGCCAGAC  
 <58846.r10 OLI28255>CAAGACCTATGTTCTGGGGCAGCAGG  
 <58848.f10 OLI28256>GAACTCCCCACCTTTGCACGCTG  
 <58848.r10 OLI28257>GATGTGTCCTTCACTCACCCGCAGC  
 <58849.f10 OLI28258>CGAACACCTTGTACTGGGAGTTGAATCAG  
 <58849.r10 OLI28259>CATCACATAGCAGAGTTCCCTCAGCCCTG  
 <58850.f10 OLI28260>GCACCTGTCAAAGCCTAAAGTCACCATG  
 <58850.r10 OLI28261>CCACAGTGGAGTAAACCGTATTGCTGG  
 <58853.f10 OLI28262>GGGACTGACCCTAGTCTGTGTCCATGC  
 <58853.r10 OLI28263>GGGATGCTGTATGGATAGGAAGGGATG  
 <58855.f10 OLI28264>CGAAGGATGGACATCCTGCAATGG  
 <58855.r10 OLI28265>GCTTAGAGACTCCACACAGACAGCCAAGG  
 <59211.f10 OLI28266>CAAGGTGACCTCGCAGGACACTGG  
 <59211.r10 OLI28267>CCTCCTGATCAGAAAGGGGCCTAACAG  
 <59213.f10 OLI28268>GAGGCTGACACCTTCATGTTTGGAGG  
 <59213.r10 OLI28269>CTCAGTGTGGTCTGGCAGGAACCG  
 <59497.f10 OLI28270>CCTGACCAAAAAATTCCCAGTAACCAGGC  
 <59497.r10 OLI28271>GTGGCCAAGTGGATAAAACAGTAGCAGTG  
 <59603.f10 OLI28272>CTGCTGTGGCTGCAGCTCTGC  
 <59603.r10 OLI28273>GACGCCAGGAAAACAGCCAGGTC  
 <59605.f10 OLI28274>GGAGTACCATCTTCCTCATGGGACCAG  
 <59605.r10 OLI28275>CATGGGAATTCAGTGGGACAACATCC  
 <59607.f10 OLI28276>CCACTACATGAGCATCACCATCTTGCTC  
 <59607.r10 OLI28277>CTGGCCAGTGAAGTGTGAGGTTCTCTG  
 <59609.f10 OLI28278>CATTCACCTTGTGTCACTGCTTGGAACC  
 <59609.r10 OLI28279>GGCATTGTTAAGCAAGGGCAGCAGAAG  
 <59610.f10 OLI28280>CTGCCTCTCAGCCCTTACCTGATGC  
 <59610.r10 OLI28281>CCCTGAGTTGCGAAGTGGCAGTC  
 <59612.f10 OLI28282>GTGAGCGGATGGACCTAGCACTTCC  
 <59612.r10 OLI28283>GACAGCTACTACTCGCCAGGTGTGCTG  
 <59613.f10 OLI28284>GAATGCAGCAACACCAGCGATGC  
 <59613.r10 OLI28285>GACCTGTGACTCCCACTTACTGGGCAG  
 <59616.f10 OLI28286>GTCAGGAGCCTGAAATCAGGCTGACTTC  
 <59616.r10 OLI28287>TCCTCCAGGCCAATCCTGACCC  
 <59619.f10 OLI28288>GTGCATGTTCCCTGTCTGGTGCC  
 <59619.r10 OLI28289>GAGTCCCTGAGGTTGGAGTCTAGCATAGC  
 <59625.f10 OLI28290>GTATTCTGCCCTGCGCATCCCAC  
 <59625.r10 OLI28291>GACTCCTCCAGTGGCACTGCAGCTC  
 <59827.f10 OLI28292>CACTGCAGCTGCGCACAGTCG  
 <59827.r10 OLI28293>GGTGCTCTGAGAAGAGGTCAGAAATGGC

<59828.f10 OLI28294>CTGCCGACACCGGACTTCAGC  
 <59828.r10 OLI28295>GCCAGCCGACCTTTCTGTGGTG  
 <59853.f10 OLI28296>CTCCTTAGCCCCGTGTGAGCCTCAC  
 <59853.r10 OLI28297>GTGCAATCTCAGCTCACTGCAGCCTC  
 <59854.f10 OLI28298>GGAGAGGCCACCGGGACTTCAG  
 <59854.r10 OLI28299>GGGGCCTGCTGAAAGACAGGGTC  
 <60283.f10 OLI28300>CTGTTTCTGATGTGGGGTTCCTCCAC  
 <60283.r10 OLI28301>CCATTGGCTTTCAAGGACCTTTCCCAAC  
 <60619.f10 OLI28302>CAGGCCCAAGTGGGTGGAATCTGTC  
 <60619.r10 OLI28303>CATCTCCCGAAGAGAGAAGTCCCAACC  
 <60625.f10 OLI28304>CCAGGAACCTGAGCTAGGTCAAAGACG  
 <60625.r10 OLI28305>GTGAATAGCCCCATCCTCTCTTGACCTC  
 <60629.f10 OLI28306>TGATCTGTCAACCAAGGAGGCCAACTC  
 <60629.r10 OLI28307>CAGGTATCAGTATGAAAAAGGATCTTTGTTTCATCAC  
 <61755.f10 OLI28308>GAATGAGCCTATCAGCAGGGCTCTAGTTTC  
 <61755.r10 OLI28309>GGAAGCCAGAAGCCAGGAGGAGC  
 <64852.f10 OLI28310>CAAGCCCTGCAGACAGTCTGTCTCC  
 <64852.r10 OLI28311>GGCTGATGCTATCATATTGCTATGGACATTG  
 <66308.f10 OLI28312>CGACATCCAGGCCAAGGACCTG  
 <66308.r10 OLI28313>CATCCTGGGATCTCATGGTTGGG  
 <68869.f10 OLI28314>GCGTACTCCACAGTGCAGAGAGTCGC  
 <68869.r10 OLI28315>GGCTATCCTAAGTACCTCATGAAGAGGAGGC

DNA #	475-477 HIVEC	W2-649 Spdm	520-522 Prefabric	470-472 Hear	538-540 LTCMS	622-729 (overflight)	75014-75019 (overflight)	229-429 (overflight)	370-372 (overflight)	377-379 HPPCamps	442-444 TIP Rumpings	624-629 DRAVULITE	W2-870 Lynphblast	expected size bp	source for cloning
1 59263	-	+	+	+	+	+	+	+	+	+	+	+	+	33	
2 59264	-	-	-	-	-	-	-	-	-	-	-	-	-	560	+
3 59855	-	-	-	-	-	-	-	-	-	-	-	-	-	459	+
4 59853	+	-	-	-	-	-	-	-	-	-	-	-	-	599	+
5 59852	-	+	-	-	-	-	-	-	-	+	+	+	+	547	
6 59849	-	-	-	+	+	-	-	-	-	-	-	-	-	516	
7 59844	-	-	-	-	-	-	-	-	-	-	-	-	-	519	+
8 59823	-	+	+	+	+	+	+	+	+	-	-	-	-	550	
9 59814	+	+	+	+	+	+	+	+	+	+	+	+	+	609	
10 59805	-	-	-	-	-	-	-	-	-	-	-	-	-	533	+
11 59802	+	+	+	+	+	+	+	+	+	+	+	+	+	536	+
12 59804	-	-	-	-	-	-	-	-	-	-	-	-	-	536	+
13 59809	-	-	-	-	-	-	-	-	-	-	-	-	-	536	+
14 59810	-	-	-	-	-	-	-	-	-	-	-	-	-	536	+
15 59812	+	+	+	+	+	+	+	+	+	+	+	+	+	551	+
16 59813	-	-	-	-	-	-	-	-	-	-	-	-	-	548	+
17 59814	+	+	+	+	+	+	+	+	+	+	+	+	+	536	+
18 59825	-	-	-	+	+	+	+	+	+	+	+	+	+	516	+
19 59828	-	-	-	+	+	+	+	+	+	+	+	+	+	522	+
20 59835	+	+	+	+	+	+	+	+	+	+	+	+	+	503	+
21 59832	-	-	-	+	+	+	+	+	+	+	+	+	+	544	+
22 59826	+	+	+	+	+	+	+	+	+	+	+	+	+	555	+
23 59828	+	+	+	+	+	+	+	+	+	+	+	+	+	575	+
24 59822	+	+	+	+	+	+	+	+	+	+	+	+	+	505	+
25 59816	+	+	+	+	+	+	+	+	+	+	+	+	+	525	+
26 59819	+	+	+	+	+	+	+	+	+	+	+	+	+	525	+
27 59825	+	+	+	+	+	+	+	+	+	+	+	+	+	543	+
28 59827	+	+	+	+	+	+	+	+	+	+	+	+	+	558	+
29 59828	+	+	+	+	+	+	+	+	+	+	+	+	+	586	+
30 59853	+	+	+	+	+	+	+	+	+	+	+	+	+	602	+
31 59854	+	+	+	+	+	+	+	+	+	+	+	+	+	508	+
32 60283	+	+	+	+	+	+	+	+	+	+	+	+	+	549	+
33	+	+	+	+	+	+	+	+	+	+	+	+	+	580	+
	+	+	+	+	+	+	+	+	+	+	+	+	+	275	+





[illegible]

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**